

1.0 Introduction

This technical note should be read alongside and in accordance with the following drawings compiled by Jubb:

- 20189-611-P2 Volumetric Analysis of Allotment
- 20189-612-P2 Allotment Access Road GA (Sheet 1 of 2)
- 20189-613-P2 Allotment Access Road GA (Sheet 2 of 2)
- 20189-614-P1 Allotment Access Road Typical Details

The above drawings provide details of the engineering strategy associated with enabling works required to create an Ecological and Allotment zone within a section of the West Carclaze Garden Village Development. The location of this area is shown below in an extracted image taken from the prepared design and access statement (DAS) by fellow project team member LHC.



Figure 1: Site Plan – Ecological and Allotment Zone and Access shown in outline in red.

The work briefly comprises of the infilling of the ecological zone to bring site levels up to enable direct access and to form suitable platforms to enable allotment placement. Additionally, existing site access tracks which lead from the site access off the A391 to the site, are to be upgraded to offer improved vehicle provision for allotment end users.

2.0 Levels Strategy

Drawing 20189-611 identifies the proposed levels changes to enable improved access to the higher eastern side of the site with access tracks already exist. A landscape proposal has been developed for the ecological and allotment zone to offer proposed levels comprising typically 1:12 surface gradients to the main area, with typically 1:3 surface gradients to tie in with existing levels to the sites western side. No formal retaining structures are proposed.

As existing tracks already exist on the site, these are to be reused to form an accessible route from the A391 junction to the allotment area. Details of access road construction can be found on drawing 20189-614.

3.0 Drainage Strategy

Although the proposed land area associated to the site currently has no formal drainage route, with surface run off either holding on the surface and/or transferring to ground (where possible), a more formalise drainage path has been able to be created as part of the development of this proposal.

Reference should be made to drawings 20189-611 to 614 to support the below description.

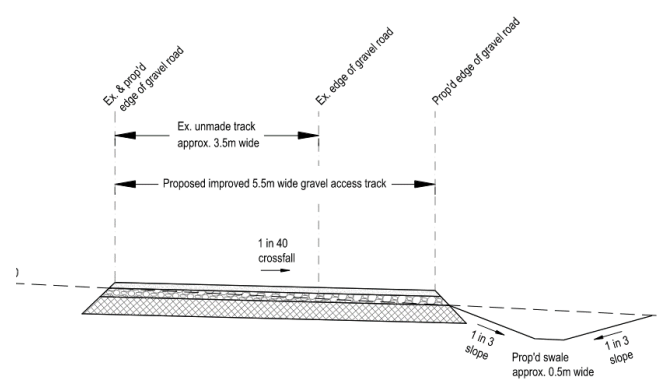
Ecological and Allotment Zone

As mentioned above, the existing site levels are to be raised to create improved access for the site. In doing this a more natural run off route to the open watercourse channel to Ruddle Pit will be able to be created across the ecological and allotment zone.

It should be noted that proposed levels changes have been made so not to create any impact or restriction to the existing open watercourse channel which runs to the western side of the site.

Access Tracks

The below image identifies the drainage strategy which has been developed for the improved access tracks. As previous soakaway testing produced only one single infiltration rate of 3.0×10^{-6} it was concluded that based on Hazens Rile a soil permeability rate equivalent to 9.48×10^{-7} could be determined for the site. Ground infiltration methods such as linear stone filled trenches or soakaways are deemed unsuitable, therefore shallow swales have been provided to control water runoff.



TD2 - Typical Section through Access Road
(A391 junction to Great Treverbyn Sky Tip)

Figure 2: Typical access road swale detail

The swale arrangement to the section of access road from the Sky Tip to the A391 will allow surface water runoff to be controlled. The swale will act as a storage detention system, with a slow infiltration function, this will improve water quality of the run-off and help to control sedimentation.

Shallow conveyance channels to the next section of access track will convey surface water discharge into an existing downstream pond to the West Carclaze Mica Dam via a pipe outlet. The remaining sections of allotment access road inbound of the site to the north and west of the solar farm are also to discharge surface water via open conveyance channels to piped outlets discharging into the Great Treverbyn Lake.

An improved outlet, linking the West Carclaze Mica Dam Pond to the Great Treverbyn Lake, is to be laid under both the allotment access road and the continuous bank level of the Lake which is set at a minimum height of 220.000m.

4.0 Conclusion

As outlined within this technical note and the associated drawings a pragmatic and sensitive approach has been developed which offers best use of existing redundant land space and embraces sustainable drainage features where possible to enhance the proposed scheme.

5.0 Further Information

Supporting Drawings

- 20189_611_(P2)_Volumetric Analysis of Allotment Area including Access Track – Sheet 1
- 20189_612_(P2)_Allotment Access Road General Arrangement – Sheet 1 of 2
- 20189_613_(P2)_Allotment Access Road General Arrangement – Sheet 2 of 2
- 20189_614_(P1)_Allotment Access Road Typical Construction Details – Sheet 1